

## OBITUARY NOTICES OF FELLOWS DECEASED.

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SIR JOHN ERIC ERICHSEN, Bart., Surgeon Extraordinary to the Queen, who died on September 23, 1896, will, without doubt, take rank amongst the most distinguished surgeons of the century. There must be very few of the present generation of practitioners of surgery in English-speaking countries who have not come under his influence, at any rate indirectly; for his book on the Science and Art of Surgery, which made its first appearance in 1853, at once took a foremost place as the principal text-book of that subject, a place which in successive editions, to the number of ten, it has maintained ever since. Nor has it failed to be translated into most European languages, and even, it is said, into Chinese.

Erichsen was descended, on the father's side, from a Danish family, whose importance is still testified in Copenhagen by the palace which bears the same name. On his mother's side he sprang from a Somersetshire stock—the Govetts. He was born on July 19, 1818, in Copenhagen, but was educated in England. After the termination of his school career, he entered as a student at University College, where Liston was then the chief surgeon, and where also he came under the strong personal influence of William Sharpey, who, as in so many other cases, early discovered the scientific bent in young Erichsen's character, and was instrumental in directing it into a useful field. Having, like many other professional men, more leisure in the early period of his career than he ever had in the later, Erichsen devoted himself to the study of physiology, and for a time taught the subject at the Westminster Hospital Medical School. He acted in 1844 as Secretary to the Section of Physiology of the British Association, and was the working member of a small committee appointed by the Association to undertake an experimental enquiry into the mechanism and effects of asphyxia, and the prevention and treatment of that condition. His researches on this subject were published in 1845, and his labours were recognised by his being awarded a gold medal, of the value of 50 guineas, by the Royal Humane Society.

In those days, no education in medicine and surgery was considered complete unless it had been supplemented by residence in Paris, and attendance upon the cliniques of the great French physicians and surgeons. Accordingly we find Erichsen pursuing his studies in that capital, and, amongst other things, present on the first occasion of the performance of a colotomy, by Amussat.

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Erichsen had not for long leisure to devote to scientific pursuits, for, owing partly to his exceptional ability, partly to extraneous circumstances, his advancement in the profession of surgery was very rapid. Liston had died suddenly, from aneurism, in 1847, and his place was filled for a short period by Syme, who soon, however, returned to Edinburgh. Mr. Richard Quain then became surgeon to the hospital, and with him was associated as Professor of Surgery, Mr. Arnott, at that time senior surgeon to the Middlesex Hospital. The position of assistant surgeon, which was rendered vacant by Quain's advancement, was filled by the appointment of Erichsen. This position he only held for two years, for at the end of that time Arnott resigned his chair and the surgeoncy to University College Hospital, and Erichsen was appointed by the Council of the College to succeed him. This was in 1850, and at the early age of thirty-two. How abundantly the choice of the Council was justified is shown by the brilliant success which attended his teaching. It is not too much to say that the reputation of the School of Medicine at University College, as a training place for practical and scientific surgery, is due in no small measure to his influence.

Erichsen held the Professorship of Surgery for sixteen years, and then exchanged it for the Chair of Clinical Surgery, which he held for another nine years, so that he was for a quarter of a century occupying a leading position in the teaching of surgery in one of the first medical schools in the kingdom. Apart, therefore, from the indirect influence exerted by his writings, the direct influence he exerted in the training of students for the medical profession was considerable. And it must be recorded of him that, unlike many a brilliant surgeon of his time, he regarded, and taught his pupils to regard, surgery as a science to be studied rather than simply as an art to be displayed—a line of thought which has been pursued with conspicuous success by the most eminent of those pupils, the present President of this Society.

Although essentially an all-round surgeon, and one whose opinion in any branch of surgery was regarded, and rightly so, as of more than average weight, there were one or two branches to which Erichsen more especially devoted his attention. Early in his career he took up the subject of aneurism—always one of great interest to him—and contributed several articles dealing with its pathology and treatment. Later, he turned his attention to the important, and at the time ill-understood, subject of the results of railway injuries, a subject upon which he was for many years the acknowledged authority.

Erichsen possessed a singularly attractive personality, with a courteous and winning manner, which reflected the kindly nature within, and a dignified presence, without a tinge of pomposity. His

language, whether in public or private utterance, was always well chosen, his manner of speaking clear and to the point, his material well arranged. These qualities, although he possessed no particular gift of eloquence, made it always a pleasure to listen to him. A prominent characteristic of the man was his tact in dealing with difficult situations, and, it may be added, with difficult people. He was always ready, when appealed to, to afford assistance by advice, or even in a more material way, to his friends and professional brethren who might stand in need of such assistance, and many a young man has benefited by his thoughtful liberality. Small wonder that he was highly regarded in the profession of which he was so distinguished an ornament, and by the colleagues and pupils with whom he was so long and so honourably associated. His eminence in surgery was acknowledged by the Royal College of Surgeons, in 1880, in electing him to occupy the presidential chair, and at the International Medical Congress, in 1881, in his selection to preside over the section of surgery at the meeting in London. He was also President for three years of the Royal Medical and Chirurgical Society. He was a member of the Royal Commission on Vivisection, which sat in 1875, and was the first Inspector for England and Scotland under the Act which resulted from the sittings of that Commission. He was elected a Fellow of this Society in 1876. He contested the Universities of Edinburgh and St. Andrews, in 1885, in the Liberal interest, but without success. He received the honorary degree of LL.D. from the University of Edinburgh, on the occasion of the tercentenary celebration, and was besides the recipient of numerous honours, culminating in the somewhat tardy recognition of his merits by the Government in creating him a baronet, in 1895. But the honour which he, perhaps, chiefly prized was that which his Alma Mater did him and herself in electing him, in 1887, to the important and dignified position of President of the Council of University College, a position which he occupied until his death, to the manifest advantage of both the College and the Hospital, with which his whole career had been so closely interwoven.

Erichsen was married, in 1842, to Mary Elizabeth, daughter of Captain Thomas Cole, R.N. They had no children. His wife died in 1893, and was buried at Hampstead Cemetery, and he was himself laid to rest in the same grave, on September 26, 1896.

E. A. S.

SAMUEL JAMES AUGUSTUS SALTER, or James Salter, as he always called himself, came from a medical family at Poole, various members of which achieved distinction in medicine or in science. He was born in 1825, and received his medical education at King's College. How well he spent his pupil days may be gleaned from

the fact that he graduated as M.B. at the London University, and acted as one of Fergusson's house-surgeons. His uncle, Mr. Thomas Bell, the eminent zoologist, was one of the few highly trained dental surgeons of his day, and induced his nephew to join him in partnership, as also in the conduct of the dental department of Guy's Hospital. The foundations of his fortunes were thus laid, to the detriment, it must be feared, of his work in science. Immersed as he was in practice he still found time to interest himself in scientific pursuits, and was an active member of several societies, medical and other.

He was also the author of a paper in the 'Philosophical Transactions' on the "Structure and Growth of the Tooth in Echinus," and in 1863 became a Fellow of the Royal Society. He had become a Fellow of the Linnean Society in 1853.

His work 'Dental Pathology and Surgery,' 1874, at once secured him a leading place, but the time expended in its preparation had been so great that it is to be feared that the work was hardly issued before it was out of date.\*

Salter had a good general knowledge of botany, and it is to him that we owe the discovery of a fact the full significance of which is not worked out yet. This consisted in the discovery of perfectly formed pollen grains within the tissue of the nucellus of the ovule, as recorded and figured in the 'Transactions of the Linnean Society,' vol. 24, 1863, p. 143, pl. 24. Whether the megasporange was developed or not, we do not know, nor what were the precise cells engaged in forming pollen grains in this extraordinary position. It is to be hoped that some future investigator may be able to supply information on these points. That the condition is not confined to passion flowers we know from having seen a like state of affairs in *Rosa canina*.

On quitting his profession, Salter retired also from London life into the country, where he occupied himself with rural pursuits and horticulture, and amused himself with heraldry and archæology.

Personally, he was most amiable, and so stocked with general knowledge that he was a delightful companion and ready to afford help where help was needed. He married late in life, but his wife predeceased him by a year or two. He died March, 1897.

M. T. M.

\* This, his only book, was rather the expansion of the writer's notes and experiences over a long series of years than a complete systematic treatise on the subject, and so had a kind of personal character. And although, after the manner of so many of the scientific writers of that day, he sometimes plunged into warm controversy, and not always, as things have turned out, on the right side; yet his work remains of solid value as a record of original and thoughtful observation, and as such is still frequently quoted in the text-books of to-day.

C. S. T.

The death of Dr. GEORGE HARLEY, F.R.S. (on October 27, 1896), has removed in the midst of active labour a distinguished physician, a true lover of science, a devoted husband and father, and, to the writer of the present biography, an old and valued friend.

The subject of this notice was born at Haddington, on February 12, 1829, and came from a race of famed ecclesiastical and literary men. The Harleys of Haddington played an important part in the old Roman Catholic times, the Rev. Dr. John Harley, of Magdalen College, Oxford, becoming, in 1553, the first Protestant Bishop of Hereford, and his cousin, the Rev. William Harley, the first legally inducted Protestant clergyman in Scotland; both were pupils and friends of John Knox. After this time the Harleys of Haddington took to the law, and for a number of generations were lawyers of considerable local repute. George Harley's grandfather, Patrick Harley, born in 1717, was a lawyer, though better known locally as a poet and antiquarian. His father, born in 1766, lived as a country gentleman, at Haddington, but died when George was only three years old, leaving his education to his mother, who was a very talented woman, and her son inherited her abilities and originality.

George Harley was educated at the Haddington Burgh Schools, and at the age of 17 matriculated as a medical student at the University of Edinburgh.

While at Edinburgh Harley had every opportunity of acquiring the rudimentary knowledge of his profession, of which he duly availed himself. The Edinburgh University was then distinguished as a school of medicine by an unrivalled staff of Professors. John Goodsir was not only an accomplished human anatomist, but also learned in comparative anatomy, on which he frequently lectured, and the writer of this notice, who attended his lectures, together with George Harley, can testify to Goodsir's brilliant and fascinating delivery. Rather narrow-chested, thin, tall, and with intellectual features, Goodsir, speaking in a broad Scotch accent, would hold a large class in breathless interest on the history of the Medusæ, a subject on which he delighted to lecture. Allen Thomson lectured on physiology, in which he excelled. The microscope was not, however, at that time so intimately connected with the study of physiology as it was destined to become under Hughes Bennett, who succeeded Allen Thomson. In materia medica Dr. Christison, afterwards Sir Robert Christison, lectured to a large class, captivating students by his extensive knowledge of the subject he dealt with, and by his flowing and easy delivery. George Harley's eldest daughter afterwards married the nephew of Sir Robert Christison. In the Botanical Gardens, in spring and summer, Balfour would meet his class three or four times a week, and address his students with the impression that everybody ought to be a botanist, and

that a love of botany should be innate in every one of his audience. Alison, brother of the distinguished historian, was Professor of Medicine, a fine, rather stout and imposing gentleman, kindness itself to all the students, and painstaking in hospital work. It was reserved, however, to Hughes Bennett to introduce into clinical teaching the admirable method of examining patients which came into general use in the infirmary, and found its way by degrees into private practice. The chair of pathology was held by Dr. Henderson, while Dr. W. Gairdner, of Glasgow, perhaps the last of the survivors of the Edinburgh lecturers towards the end of the forties, held an extra-academical class of pathology, and delivered a set of well prepared and interesting lectures. In surgery Professor Symes and Professor Miller occupied the highest positions, Symes as an admirable operator, and Miller as an excellent lecturer, while Dr. James Simpson (afterwards Sir James) addressed several times a week a crowded audience on midwifery and gynaecology, subjects which particularly attracted George Harley's attention, as we find him acting as house surgeon to the Maternity Hospital; and it was through Sir James Simpson that Harley obtained his first appointment in London.

Such were the eminent professors under whose tuition George Harley acquired his earliest professional knowledge. But this was not all: the society at Edinburgh into which Harley and other students of medicine were admitted with true Scotch hospitality, contributed in no little degree to the development of his social and intellectual powers. Lord Jeffrey, the distinguished author of "Essays and Reviews," and other Judges, such as Lord Murray, Lord Ivory, and Lord Fullerton extended a friendly hand to many of the medical students, and asked them to dinner and evening parties.

While at Edinburgh, Harley became acquainted and made friends with many students, who were destined to become distinguished in after-life. Most of them have now departed from this world, amongst whom I might recall the names of Dr. Charles Murchison, who died at an early age—had he lived, he would undoubtedly have ranked amongst the most distinguished physicians of the time—and Dr. Spencer Cobbold, F.R.S., well known for his labours on Entozoa.

George Harley graduated at Edinburgh in 1850, at the same time as the writer of this notice, and was duly capped before a large audience. There were that year about 80 students who obtained their doctor's degree, while at the present time more than twice that number are yearly added to the roll of the Edinburgh graduates.

Before dismissing George Harley's career as a student, an indication of his promptitude and determination of character may be gathered from the circumstance that while acting as House Surgeon

to the Royal Maternity Hospital, he successfully performed the Cæsarean section on a woman who had just died, and extracted a living child, now grown up to be a father of a family. The case was read by Professor Simpson, at the Medico-Chirurgical Society of Edinburgh, and published in the 'Edinburgh Journal of Medical Science' for July, 1850.

After graduating, Dr. George Harley went to Paris, and there began his scientific studies. He entered the laboratory of Messrs. Wurtz and Verdeil, Rue Garancière, and for a winter worked there, together with the author of the present notice. This laboratory had been opened by Professor Ad. Wurtz, the distinguished chemist. He had rented a spacious apartment on the ground floor of a house, Rue Garancière, and at great expense and no little trouble, had turned it into a chemical laboratory, most complete in its fittings, where he was then joined by two other chemists, Dr. Verdeil, a Swiss gentleman, and Monsieur Charles Dollfus Galline, who was part owner of large dyeing works in Alsace, and had made a special study of the chemistry of colouring matters. Wurtz taught chemistry proper, Verdeil chemistry applied to physiology and pathology, and Dollfus chemistry in its application to technology.

The building enclosed a spacious courtyard, and on the side opposite to the laboratory, Charles Robin, who, with Claude Bernard and Majendie, was at the head of physiological science in France, opened a laboratory of experimental physiology, where a few Englishmen obtained instruction which in some instances matured into high distinction.

George Harley worked under Verdeil, and they soon became friends. Here he prepared all the constituents of the human body which can be obtained in the crystalline form, such as creatine, creatinine, sarco-lactates, urea, uric acid, hippuric acid, sodium taurocholate and glycocholate, fatty acids, &c.; he analysed biliary and vesical calculi, and indeed went through a complete course of physiological chemistry, but at that time he was mostly interested with the composition of urine.

That there was great activity in the Laboratory Rue Garancière may be gathered from the circumstance that one of the students wishing to prepare creatine on a large scale, purchased an old horse, and walked the poor dilapidated beast into the laboratory, and it was shot then and there. What little flesh there was on it was cut off as quickly as possible, and submitted to the various operations required for the preparation of creatine; but little of the substance, however, was obtained.

Shortly after the author of this notice had left Paris he received from Harley a letter, which contained the following passage (the letter is dated 46, Rue Vaugirard, Paris, 26th June, 1852):—

"I am still working away at Verdeil's; he is at present making observations on the fats of the blood and fæces while I am working at urine. I have made a most important discovery, namely: that the colouring matter of the urine is hæmatin, which appears to have all the properties of that in the blood, and I have clearly shown the presence of iron combined with the colouring matter, and seemingly in the same manner as it is combined in the blood. I have found this substance in the urine of many pigs, horses, cows, &c., and can get it by three or four different processes."

Harley was in Paris at the time of the *Coup d'Etat* provoked by Louis Napoleon. The writer of this notice sallied forth on the morning of that memorable day with George Harley and E. Risler, a gentleman also at work in the Rue Garancière, and who subsequently rose to a high position in France; he is now "Directeur de l'Institut Agronomique" in Paris. Paris was in a state of feverish excitement, the Place du Carrousel was so crowded that it was impossible to walk across it, when suddenly a lane opened in the crowd, and Louis Napoleon appeared on horseback, walking leisurely at the head of his staff. Thus it was that he rode round Paris, and the courage he exhibited won the day for him. Along the boulevards the cavalry he exhibited won the day for him. Along the boulevards the cavalry he drawn up apparently from the Madeleine to the Bastille, and there was firing on the people. After the firing had ceased the party, which had been joined by Verdeil, thought of visiting the Boulevards. At the corner of the Rue Vivienne they came across a dead body on the pavement; a little further on there were two more; then a poor man who had been killed still grasping with his contracted fingers a coloured handkerchief, containing apparently clothes for the wash. The cavalry looked ominously threatening, drawn up on the opposite side of the street; one of them riding up enquired the object of the party on the boulevard, and then enjoined it to leave as soon as possible, as orders had been given to fire on anybody walking about the street. Of course his injunction was strictly complied with.

Harley's next paper after the publication of that on the presence of iron in the blood, was entitled "*Recherches sur la physiologie du Diabète—nouvelle méthode pour produire artificiellement le diabète sur les animaux,*" '*Compt. Rend. Soc. Biol.,*' 1853. In this year he was elected President of the Parisian Medical Society.

While in Paris Harley worked also under Majendie and Claude Bernard. Majendie was then giving up work, after having earned a deservedly great reputation, and was succeeded at the Collège de France by Claude Bernard, who delivered an admirable course of lectures on physiology which was attended by many English visitors and by Harley amongst others.

After two years' residence in Paris, Harley went to Germany, and



studied at the universities of Würzburg, Berlin, Vienna, and Heidelberg. A paper he published in German obtained for him the corresponding membership of the Physico-medical Society of the Würzburg University.

He returned to London at the end of 1855, and through the influence of Professor Sharpey, obtained the post of Curator to the Anatomical Museum of University College. In 1859 he was appointed to the Professorship of Medical Jurisprudence, and not long afterwards joined the Medical Staff of University College Hospital.

George Harley married, in 1861, Emma Jessie, the youngest daughter of James Muspratt, of Seaforth Hall, Liverpool. Among his children are Ethel, now Mrs. A. Tweedie, the known writer, and Dr. Vaughan Harley who, following in his father's footsteps, is now Professor of Pathological Chemistry at University College.

In 1861 Harley received the triennial prize of the Royal College of Surgeons for an Essay on the Anatomy and Physiology of the Supra-Renal Bodies, and the College also granted him the John Hunter Gold Medal, of which there has only been one awarded since 1858. In 1864 he was elected a Fellow of the Royal College of Physicians of London, and in the year following, a Fellow of the Royal Society, having previously been made a Corresponding Member of the Academy of Science of Bavaria, and of the Academy of Medicine of Madrid.

Harley's career was nearly cut short in 1864, while working with a powerfully illuminated small-lens microscope, when a blood-vessel burst in his left eye, ending in retinitis, which was so severe that he was confined to complete darkness for a period of nine months, ending, however, in a perfect cure. He had to wear dark-tinted glasses for a considerable time before he could use his sight freely, and remarked to the writer of this notice, that while wearing "goggles," as he could not see well, he became accustomed to look at things more carefully than he had done before, and that when subsequently he dropped his glasses, could actually see better than before, as from training he had improved his powers of observation. Other men under similar circumstances would probably have retired into a quiet private life, but the fact that Harley had sufficient self-possession to accept a complete privation of light for nine months shows the dogged resolution and perseverance which was, perhaps, the main trait of his character, and carried him through so much good and useful work.

Harley loved to roam over a variety of subjects; he would ponder over any matter of interest to him and then record his ideas in print.

Claude Bernard's lectures, which dealt with the physiological

action of poisons and the functions of the liver, were apparently the origin of Harley's scientific bent of mind, and we find him early in his career investigating the action of "atropine" in dilating the pupil, of strychnine on the spinal cord, and of the "Calabar bean." Then he took to the special study of the liver, and in 1883 wrote his elaborate treatise on diseases of the liver, a book which was very favourably received and had a great circulation, being translated into several languages. He communicated many papers to the Royal Society—one of them even as early as 1856-7, and in 1865 was the author of a paper in the 'Philosophical Transactions of the Royal Society' "On the Influence of Physical agents on the Blood, with Special Reference to the Mutual Action of the Blood on the Respiratory Gases." He also wrote in the 'Transactions' of the Microscopical, Zoological, and Anthropological Societies, in the 'Comptes Rendus de l'Académie,' and was the author of a number of contributions to the medical papers. It would be too long to give an enumeration of all George Harley's writings scientific and medical; he was never at rest; and when he died he must have felt conscious that he had done his duty and completed his work.

W. M.

the time when Lartet and Christy were carrying on their investigations in the early caverns of the Dordogne he materially aided them in their researches, and also afforded valuable assistance in the publication of the '*Reliquiæ Aquitanicæ*.' It was mainly through his friendship with Mr. Henry Christy that the latter resolved to bequeath his fine ethnological collections, together with an endowment fund, to trustees, of whom Mr. Franks was one. Through his exertions, and aided by his own liberality, the Christy collection has attained its present extreme importance, and has been incorporated with the national collections at the British Museum, where the whole have been arranged under the immediate superintendence of Sir Wollaston Franks.

His connexion with that Museum extended over a period of more than forty-six years. In 1850 an Exhibition of Mediæval Art was held at the rooms of the Society of Arts, for which he acted as honorary secretary, and it would seem that the acquaintance that he then showed with all that related to mediæval antiquity induced Mr. Hawkins, the keeper of the Department of Antiquities at the British Museum, to offer to him the post of an assistant in that Department. On the 1st of March, 1851, he received the appointment, and during his long connexion with the Museum witnessed an immense development in its archæological collections, towards which he in no small degree contributed, and also a subdivision of the old Department of Antiquities into four departments, each charged with some special branch of archæology, of one of which, that of British and Mediæval Antiquities and Ethnography, he became keeper in 1866. To any one looking back to what the collections were at that date, and comparing them with what they are at the present time, the advance in extent, value, interest, and importance seems almost incredible. Much of this has been due to Mr. Franks' great personal influence with collectors, several of whom, actuated in no small degree by the confidence they reposed in him, have bequeathed their whole collections to the nation, while others have presented choice and valuable specimens. Of such liberality, he was himself the most conspicuous example. During the whole time that he was connected with the Museum it may be said that not a year passed without his presenting to the collections some objects for which the trustees had to return their special thanks, and when from want of funds some desirable purchase could not be made by the Museum, his private liberality was sure to come to the rescue. Nor was this liberality checked by the grave, for he has bequeathed to the Museum collections of rings, jewellery, drinking cups, and other objects, valued at a sum of £50,000.

In connexion with his work at the Museum may be mentioned the '*Medallic Illustrations of the History of Great Britain and*

Ireland,' which was published in two volumes by the trustees in 1885. This book, which was based on a catalogue compiled by the late Mr. Edward Hawkins, was completed and in a great measure re-written by Mr. Franks, though the work was in reality outside his own department. In carrying out his object he was much aided by Mr. H. A. Grueber, and the 'Illustrations' will long remain the standard authority on the subject of British medals struck before the death of George II.

His connexion with the Society of Antiquaries was almost as long as that with the British Museum, he having been elected a Fellow in 1853. He did much to improve its library and its publications, and for upwards of twenty years he was Director of the Society. His communications, both to its Proceedings and to the *Archæologia*, were numerous and important. In 1892 he was elected President, thus becoming an *ex officio* trustee of the British Museum, and on his retirement from the post of Keeper of British and Mediæval Antiquities and Ethnography in 1896 he was elected a member of the Standing Committee of Trustees.

He was elected a Fellow of the Royal Society in 1874, and was an Honorary Member of the Royal Irish Academy and of numerous Foreign Societies. He also for some years before his death held the post of Antiquary to the Royal Academy. The University of Oxford conferred upon him the honorary degree of D.C.L., and that of Cambridge of Litt. D., and in 1894 he was promoted by Her Majesty to the rank of K.C.B.

Among British archæologists there was no one who had a wider or more accurate knowledge in nearly every department than Sir Wolaston Franks, and he was ever ready to communicate all that he knew with characteristic liberality. It is, however, sad to think what an amount of incommunicable knowledge has perished with him. His kindly nature led to the formation of numerous and enduring friendships, and his death leaves in the hearts of many a void that can never be refilled.

J. E.